

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty) (PCT Article 36 and Rule 70)



Applicant's or agent's file reference 10003824W001	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2004/017331	International filing date (day/month/year) 16.11.2004	Priority date (day/month/year) 01.12.2003
International Patent Classification (IPC) or national classification and IPC Int.Cl. C09K11/06 (2006.01), H05B33/14 (2006.01)		
Applicant CANON KABUSHIKI KAISHA		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I     Basis of the report <input type="checkbox"/> Box No. II    Priority <input type="checkbox"/> Box No. III   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV    Lack of unity of invention <input checked="" type="checkbox"/> Box No. V     Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI    Certain documents cited <input type="checkbox"/> Box No. VII   Certain defects in the international application <input type="checkbox"/> Box No. VIII   Certain observations on the international application	

Date of submission of the demand 22.09.2005	Date of completion of this report 23.02.2006
Name and mailing address of the IPEA/JP  <b>Japan Patent Office</b> 3-4-3, Kasumigasaka, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer <b>YOKO WATANABE</b> Telephone No. +81-3-3581-1101 Ext. 3483

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/017331

Box No. I Basis of the report

1. With regard to the language, this report is based on:
- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- Nos. \_\_\_\_\_ as originally filed/furnished
- Nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- Nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- Nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets/figs \_\_\_\_\_ as originally filed/furnished
- sheets/figs\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets/figs\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1, 2, 3, 5, 6, 7, 8, 10-12	YES
	Claims	4, 9, 13	NO
Inventive step (IS)	Claims	3, 5, 7, 11	YES
	Claims	1, 2, 4, 6, 8-10, 12, 13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

## 2. Citations and explanations(Rule 70.7)

D1: J.Chem.Soc., Dalton Trans., (1996), P.2889-2891  
D2: J.Chem.Soc., Dalton Trans., (1999), P.1455-1459  
D3: Inorganic Chemistry Commun., (2000), Vol.3, No.11, P.585-589  
D4: J.Am.Chem.Soc., (1987), Vol.109, No.14, P.4255-4260  
D5: Inorganica Chimica Acta, (1994), Vol.225, No.1-2, P.251-254  
D6: JP 63-264692 A  
D7: JP 2002-231454 A

(claim1)

The subject matter of claim 1 does not appear to involve an inventive step in view of the D1-6 cited in the ISR. D1-5 disclose some luminescent or fluorescent or phosphorescent materials having a structure represented by the formula(1). To use a luminescent or fluorescent or phosphorescent material as EL element layer(light-emitting layer)'s material were well-known in the technical field(see D6).Therefore, employing the luminescent or fluorescent or phosphorescent materials disclosed in D1-5 as light-emitting layer's material would have been easily conceived by the person skilled in the art.

(claim2, 6, 10)

The subject matter of claim 2, 6 does not appear to involve an inventive step in view of the D1, 2, 6 cited in the ISR. D1, 2 discloses some fluorescent or phosphorescent materials having a structure represented by the formula(2). To use a fluorescent or phosphorescent material as EL element layer(light-emitting layer)'s material were well-known in the technical field(see D6).Therefore, employing the fluorescent or phosphorescent materials disclosed in D1, 2 as light-emitting layer's material would have been easily conceived by the person skilled in the art.

(claim3)

The subject matter of claim 3 is neither disclosed in any of the documents cited in the ISR nor obvious to a person skilled in the art.

(claim4)

The subject matter of claim 4 does not meet the requirement of novelty. D7 disclose a luminescent material a trinuclear metal coordination compound having a partial structure represented by the formula (4) (see claim, [ 0057] -[ 0067] ).

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: No.V

And D7 also disclose the metal is selected from the group consisting of group 5 to 11 elements of the periodic table. So it disclose the metal involves Cu.

(claim5,7)

The subject matter of claim 5,7 is neither disclosed in any of the documents cited in the ISR nor obvious to a person skilled in the art.

(claim8)

The subject matter of claim 8 does not appear to involve an inventive step in view of the D1-6 cited in the ISR. There is a probability that the materials disclosed in D1-5 have the distance between Cu atoms equal or less than 3.2 angstrom.

(claim9)

The subject matter of claim 9 does not meet the requirement of novelty. There is a probability that the materials disclosed in D7 have the distance between metal atoms equal or less than 3.2 angstrom.

(claim11)

The subject matter of claim 11 is neither disclosed in any of the documents cited in the ISR nor obvious to a person skilled in the art.

(claim 12)

The subject matter of claim 12 does not appear to involve an inventive step in view of the D1-6 cited in the ISR. It is well-known that a luminescent layer contains a part of 100% of coordination compound.

(claim 13)

The subject matter of claim 13 does not meet the requirement of novelty in view of the D7. It is well-known that a luminescent layer contains a part of 100% of coordination compound.